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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,517	10/06/2000	Cheol Kim	Q60624	8859

7590 03/18/2005

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EXAMINER

BRINICH, STEPHEN M

ART UNIT PAPER NUMBER

2624

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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20050308

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Office Action Summary

Application No.

09/679,517

Applicant(s)

KIM, CHEOL

Examiner

Stephen M Brinich

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3 and 9 is/are allowed.
- 6) ☒ Claim(s) 4 and 8 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 4 & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Mutoh et al.

Re claim 4, Mutoh et al discloses (Figure 4; column 4, lines 34-55) dithering of a multi-bit (16 levels, or 4-bit) image signal and the printing of the dithered output in dots of differing sizes. Mutoh et al further discloses (column 6, lines 27-30) the dithering of image signals representing the level of each of four colors (cyan, magenta, yellow, black); in the case of the signal representing the level of black, the image signal is a gray-level signal.

Re claim 8, Mutoh et al discloses (Figure 7; column 5, line 61 - column 6, line 4) the use of pulse width modulation to generate the dots corresponding to a given image signal.

Allowable Subject Matter

3. Claims 1-3 & 9 are allowed.

Art Unit: 2624

4. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

Re claims 1, 5, & 9 (and dependent claims 2-3 & 6-7), the art of record does not teach or suggest the recited combination of binary halftone thresholding based on a conversion of a gray component value to a printer resolution and multi-bit dithering to produce multiple dot sizes.

Response to Arguments

6. Applicant's arguments filed 8/10/04 have been fully considered but they are not persuasive.

Applicant argues (8/10/04 Remarks: page 6, line 10 - page 8, line 10) that Mutoh et al does not disclose the recited multi-bit dithering to a pulse width modulated output of an image expressed as a gray component.

Re the element of "multi-bit dithering", the outstanding claim recitation of this element does not specify the exact nature of the "multi-bit" feature, and is thus readable upon the dithering of multi-bit image data as disclosed by Mutoh et al (Figure 4; column 4, lines 34-55).

Art Unit: 2624

Re the element of dithering an image expressed as a gray component, as noted above Mutoh et al discloses (column 6, lines 27-30) the dithering of image expressed as four color components, the level of one of which (black) is readable as a gray component.

Re the element of pulse width modulation, as noted above Mutoh et al discloses (Figure 7; column 5, line 61 - column 6, line 4) the use of pulse width modulation to generate the dots corresponding to a given image signal.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2624


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Brinich at 703-305-4390. The examiner can normally be reached on weekdays 7:00-4:30, alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2600 Customer Service center at 703-306-0377.

If attempts to contact the examiner and the Customer Service Center are unsuccessful, supervisor David Moore can be contacted at 703-308-7452.

Faxes pertaining to this application should be directed to the Tech Center 2600 official fax number, which is 703-872-9306.

Stephen M Brinich
Examiner
Art Unit 2624

smb 
March 15, 2005



THOMAS D.
~~LEE~~
PRIMARY EXAMINER